IN THE CLAIMS:

Please cancel claim 18, without prejudice or disclaimer, and replace existing claims 4, 5, 9 and 11 with the following:

Sub 1+1

Claim 4. (Twice amended) A recombinant multimeric protein according to claim 1, wherein the heterologous fragments in monomer A and in monomer B are specific ligands of the immune system, selected from the group consisting of lymphocytes surface proteins of the CD type, antibodies, antibody fragments, antigens, and antigen fragments.

G1

Claim 5. (Thrice amended) A recombinant multimeric protein according to claim 4, wherein the lymphocyte surface proteins are selected from the group consisting of CD4, CD8, CD16, CD35, CR1 and combinations thereof.

Claim 9. (Four times amended) A recombinant multimeric protein according to claim 1, wherein the polypeptide fusion monomer A comprises CD4 or a fragment thereof, and monomer B comprises the scFv of an antibody.

G2

Claim 11. (Four times amended) A recombinant multimeric protein according to claim 1, wherein the polypeptide fusion monomer A comprises a vaccinating immunogen, and monomer B comprises a CD4 or a fragment thereof that retains the ligand property of the whole molecule.

G3

REMARKS

Reconsideration is respectfully requested in light of the foregoing amendments and remarks which follow.

Claims 1-18, 20 and 22-26 are pending. The Office Action mailed November 27, 2001 rejecting pending claims 1, 4-12, 16-18, 20, 23 and 26 has been received and its contents carefully noted. Applicants acknowledge with thanks the Examiner's decision to allow claims 2, 3, 13-15, 22, 24 and 25.

Claim 18 has been canceled, without prejudice or disclaimer of any subject matter contained therein. In particular, Applicants retain the rights to file divisional and/or continuation applications directed to any cancelled subject matter.

Claims 4, 5, 9 and 11 have been amended to address points raised in the Official Action and to improve form. No new matter is believed to have been added. These claims have been amended to further particularly point out and distinctly claim the subject matter which Applicants regard as the invention. These claims do not include any amendments for a purpose of narrowing scope or limiting the inventive subject matter, but rather are intended to clarify certain aspects of the invention already set forth in the claims.

Claims 1, 12 and 20 are independent. It is submitted that no new matter has been introduced by the present amendment and entry of the same is respectfully requested. Applicants respectfully submit that their application is now in condition for allowance.

Rejections under 35 U.S.C. §112, first and second paragraph

Claims 4-7, 9 and 11 were rejected based on 35 U.S.C. § 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention.

Claims 4, 5, 9 and 11 have been amended to clarify the scope of the claims. The term "derived" has been removed and replaced with language that more clearly sets forth the breadth of the claims in relation to structure and function.

The Examiner further objected to the term "CD type" in claim 4. The term "CD type" means the family of Cluster Differentiation antigens. The common feature of these antigens which is well known by the skill person is the fact that they all pertain to human leu cocyte surface antigens. Enclosed in the concurrently filed IDS is a copy of chapter 61 of the reference book edited by Herzenberg, which defines this term.

For these same reasons, the Examiner's rejection to claims 4, 5, 9 and 11 based on 35 U.S.C. § 112, first paragraph for lack of enablement is now moot.

Claims 6 and 7 were rejected for depending on an indefinite base claim. These claims should now be in a condition for allowance.

With the cancellation of claim 18, Examiner's rejection based on 35 U.S.C. § 112, first paragraph for lack of enablement is now moot.

Rejections under 35 U.S.C. §102(b)

Claims 1, 4-12, 15, 17, 20, 23 and 26 have been rejected as anticipated under 35 U.S.C. § 102(b) based on PCT publication Biogen WO 91/11461 ("Biogen"). The Applicants respectfully traverse these rejections because the cited references do not teach or suggest all the claimed elements.

The Examiner has consistently stated in previous actions, e.g. the April 27, 1999 Office Action, the March 21, 2000 Office Action and the May 11, 2001 Office Action, that except for the paragraph §112 rejections, that the claims were allowable or allowed. There is no basis for the Examiner to withdraw that finding.

The Examiner now asserts that "Biogen Inc. disclose a recombinant multimeric protein comprising the alpha chain of C4BP and the beta chain of C4BP wherein monomer are linked by disulfide bonds... the multimeric fusion polypedpide can [contain] fusions comprising immunoglobulin, antigens, CD4 type proteins and therapeutic enzymes... absent evidence to the contrary. Also disclosed are host cells containing the recombinant polypeptide and methods of producing recombinant polypeptide."

The Biogen publication does not disclose recombinant C4BP multimeric proteins having incorporated a recombinant form of the beta chain of this molecule as in the present invention. The Biogen publication refers to one C4BP monomer, the alpha chain sequence, which is depicted in figure 1 (cf. page 9, lines 19-21). In fact, the existence, structure and function of the beta chain were unknown at the time the Biogen publication was filed.

The definition of "multimeric C4BP fusion proteins" and "heteromultimeric C4BP fusion proteins" contains assemblies of fusion polypeptides, i.e. of a C4BP monomer (which is the alpha chain) bound to a functional moiety (see page 9, line 32 to page 10, line 7).

The drawbacks of the multimers described by the Biogen publication are explained on page 1, line 32 to page 2, line 9 of the specification of the present application. For example, the ratio of hetero-multimers of the alpha chain is uncontrollable. Another example of its drawback is that the number of the monomers in the multimer can vary between 4 and 8, which is also uncontrollable.

The novelty of the present constructions and of the methods for preparing thereof are patentable as already been acknowledged in the proceeding office actions.

For all these reasons, Applicants respectfully submit that the invention claimed by the present application is not anticipated in view of the Biogen publication, and request that the rejections of the claims under 35 U.S.C. § 102(b) be withdrawn.

In summary, the reference fails to establish anticipation. Withdrawal of the rejections is, accordingly, requested. Applicants respectfully submit that their application is now in condition for allowance. Should any questions remain, please contact the undersigned.

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Respectfully submitted,

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APPENDIX 1

VERSION WITH MARKINGS TO SHOW CHANGES MADE

The following represent the specific changes made to the specification and claims pursuant to the Amendment.

Claim 4. (Twice amended) A recombinant multimeric protein according to claim 1, wherein the heterologous fragments in monomer A and in monomer B are [derived from] specific ligands of the immune system, selected from the group consisting of lymphocytes surface proteins of the CD type, antibodies, antibody fragments, antigens, and antigen fragments.

Claim 5. (Thrice amended) A recombinant multimeric protein according to claim 4, wherein the [fragments derived from] lymphocyte surface proteins are selected from the group consisting of CD4, CD8, CD16, CD35, CR1 and combinations thereof.

Claim 9. (Four times amended) A recombinant multimeric protein according to claim 1, wherein the polypeptide fusion monomer A comprises CD4 or a [derived protein] fragment thereof, and monomer B comprises the scFv of an antibody.

Claim 11. (Four times amended) A recombinant multimeric protein according to claim 1, wherein the polypeptide fusion monomer A comprises [fragments containing]

a vaccinating immunogen, and monomer B comprises[,]

a CD4 or a [derived molecule] fragment thereof that retains the ligand property of the whole molecule.